

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

GESTURE TECHNOLOGY
PARTNERS, LLC,

Plaintiff

v.

HUAWEI DEVICE CO., LTD.,
HUAWEI DEVICE USA, INC.,

Defendants.

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CASE NO. 2:21-cv-00040-JRG
(Lead Case)

JURY TRIAL DEMANDED

GESTURE TECHNOLOGY
PARTNERS, LLC,

Plaintiff

v.

SAMSUNG ELECTRONICS CO., LTD.
AND SAMSUNG ELECTRONICS
AMERICA, INC.,

Defendants.

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CASE NO. 2:21-cv-00041-JRG
(Member Case)

JURY TRIAL DEMANDED

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Exhibit D	U.S. Patent No. 8,878,949
Exhibit E	Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief
Exhibit F	Declaration of Defendants' Expert Robert Louis Stevenson, Ph.D on Claim Construction
Exhibit G	Supplemental Declaration of Defendants' Expert Robert Louis Stevenson, Ph.D on Claim Construction
Exhibit H	U.S. Patent App. No. 10/893,534 Prosecution History, Apr. 24, 2008, Notice of Appeal
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Exhibit Q	U.S. Patent App. No. 11/349,350 Prosecution History, May 12, 2010 Pre-Appeal Brief Request for Review

¹ Exhibits A–E refer to the exhibits filed with GTP's Opening Claim Construction Brief (Dkt. 64).

Exhibit R	U.S. Patent No. 6,545,670
Exhibit S	'949 Patent Prosecution History, May 14, 2014 Final Rejection
Exhibit T	IPR2021-00917, Patent Owner's Preliminary Response

I. INTRODUCTION

Despite advocating that no construction is necessary for most of the disputed claim terms, GTP attempts to stretch these terms well beyond their plain and ordinary meaning in an effort to establish infringement. For example, GTP contends that scanning the iris of an eye somehow involves detecting a “gesture” within the meaning of the claims. Such examples permeate GTP’s infringement contentions. Construction of these terms is needed to resolve the parties’ disputes as to their scope. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361–62 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”).

Further, GTP attempts to avoid the strict *quid pro quo* of means-plus-function claiming by rewriting the claim language, ignoring key intrinsic evidence, and rewriting the specification to create links between structure and function that do not otherwise exist. For example, GTP attempts to read out the antecedent basis for the claimed function of the “means for controlling” limitation—rewriting “*said* apparatus” and “*said* information” as “*any* apparatus” and “*any* information”—to broaden the function in an effort to find corresponding structure. GTP’s wholesale changes during claim construction to its proposed corresponding structure for multiple terms, including “means for controlling,” reveal GTP’s difficulty attempting to find such structure. GTP’s efforts fall short because no such structure is disclosed in the patents for many means-plus-function terms.

Moreover, GTP asks the Court to ignore multiple defects in the claims that render them indefinite. For example, GTP asserts apparatus claims that explicitly require that the device’s camera be oriented to view a user, which necessarily requires a user to be using the device so that the camera can face her. Such “mixed mode” claims are indefinite under *IPXL*. Further, GTP’s contention that both sides of the accused products are the “forward facing portion,” a term not mentioned outside the claims, only highlights the term’s indefiniteness. GTP’s efforts to twist the

claims like a “nose of wax,” *White v. Dunbar*, 119 U.S. 47, 51 (1886), should be rejected in favor of Defendants’ proposals founded on the intrinsic and relevant extrinsic evidence.

II. ‘431 PATENT

A. “means for controlling a function of said apparatus using said information” (Claim 7)

Disputes: (1) Should the function be interpreted as per Federal Circuit law on antecedent basis; and (2) does the specification clearly link structure to the function as properly construed?

The parties agree that the “means for controlling” is a means-plus-function limitation, but disagree as to the function and the structure.

“The first step in construing such a limitation is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Defendants’ proposed function clarifies the antecedent basis for “said apparatus” (“handheld computer apparatus” in the preamble) and “said information” (“information concerning a position or movement of said object positioned by a user operating said object” in the “computer means” limitation, where “said object” in turn refers to “an object positioned by a user operating said object” in the “camera means” limitation). GTP contends that this imports “extraneous limitations not recited in the claim,” despite these limitations being expressly recited. In essence, GTP’s position is that the antecedent basis should be ignored such that the function is “controlling a function of *[any]* apparatus using *[any]* information.”² The law, however, holds that anaphoric phrases using “said” refer back to the initial antecedent phrase. *See Predicate Logic, Inc. v. Distrib. Software, Inc.*, 544 F.3d 1298, 1305 (Fed. Cir. 2008) (“The ‘*said*’ instantiated indexes’ must be instantiated indexes with an antecedent basis elsewhere in the claim—namely, the indexes that are instantiated during the ‘instantiating’ step.” (emphasis in original)). GTP itself

² All emphasis in this brief is added unless otherwise stated.

applied this rule in trying to avoid invalidity in response to a third party’s IPR Petition, arguing the preamble of Claim 7 is limiting because “[t]he [“means for controlling”] limitation of claim 7 refers back to the same handheld computer apparatus for antecedent basis.” Ex. T (IPR2021-00917, Patent Owner’s Preliminary Response) at 6. GTP only ignores the rule here because it undermines GTP’s arguments.

Defendants’ proposed function is consistent with Federal Circuit precedent, in which the function recited in a means-plus-function limitation has been construed as incorporating the initial antecedent phrase. For example, in *Rain Computing, Inc. v. Samsung Electronics America, Inc.*, 989 F.3d 1002, 1004, 1007 (Fed. Cir. 2021), the Federal Circuit agreed with the parties that the function of “a user identification module configured to control access of *said one or more software application packages*” was “to control access to *one or more software application packages to which the user has a subscription*,” incorporating the antecedent phrase from a preceding limitation: “accepting, through a web store, *a subscription of one or more software application packages from a user*.” Application of the rule is even more straightforward here.

Conversely, GTP’s cited cases are inapposite. In *Micro Chemical, Inc. v. Great Plains Chemical Co.*, 194 F.3d 1250, 1258 (Fed Cir. 1999), the district court’s error limiting the “weighing means” function to “cumulative weighing” had nothing to do with antecedent basis. Similarly, in *U.S. Ethernet Innovations, LLC v. Ricoh Americas Corp.*, No. 6:12-cv-00235-MHS-JDL, 2013 U.S. Dist. LEXIS 117421, at *27 (E.D. Tex. Aug. 20, 2013), defendants’ attempt to import “automatically changing the threshold value” had nothing to do with antecedent basis.

The motive for GTP’s attempt to improperly broaden the function seems clear: There is no corresponding structure disclosed for controlling a handheld device using position or movement information of an object positioned by a user. “In exchange for using [means-plus-function]

claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function *and clearly link that structure to the function.*” *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014). Further, “[a] computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm.” *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005). Here, the claimed function is indisputably computer-implemented since “said apparatus” is referring to the handheld computer apparatus. Indeed, GTP originally proposed that the structure was “a computer with at least one microprocessor specially programmed for controlling said apparatus using said information,” but was unable to identify any algorithm. D.I. 55-1 at 1 n.1. This is because the specification of the ’431 Patent does not clearly link *any* structure, let alone an algorithm, for performing the claimed function. Ex. F (Stevenson Decl.), ¶ 44.

The claimed function requires controlling a function of a handheld computer apparatus, and the patent discloses using a handheld device only in the Figure 8 embodiment. *See* Ex. A at FIGS. 8A, 8B, 11:53–13:44; Ex. F, ¶ 45; *see also* Ex. T at 7 (“Claim 7 purposely recites a ‘handheld device’ to claim the handheld-device embodiments disclosed in the specification.”). But the patent does not describe controlling the handheld device *using position or movement information*, let alone using position or movement of an object positioned by a user, as the claim requires (wherein the object is a finger for dependent Claim 8). Ex. F, ¶¶ 46–51, 56–57. And, neither GTP nor its expert cite this embodiment as providing corresponding structure. Ex. E, ¶¶ 53–55.

Instead, GTP proposes that the structure is “a control system associated with a camera.” The patent, however, does not clearly link GTP’s proposed structure to the claimed function. The patent refers to a “control system” in only two ways: (1) generically when disclosing that the

potential for target acquisition in a millisecond or two using pixel addressable CMOS cameras “has major ramifications for the robustness of control systems built on such camera based acquisition, be they for controlling displays, or machines or whatever,” and (2) in the Figure 17B embodiment that discloses using a control system to position a robot for 3D acoustic imaging. Ex. A at 5:50–60, 25:5–35. Neither instance discloses using a control system to control a function of a *handheld device* using *position or movement information of an object positioned by a user*. Ex. G (Stevenson Supp. Decl.), ¶ 6; see *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1425 (Fed. Cir. 1997) (“Although Fig. 3 of the patent shows a valve seat, neither the specification nor the prosecution history contains any indication that the valve seat structure corresponds to the recited function, *i.e.*, that it holds the flexible disc against the triangular member so as to restrain sideways movement.”). Moreover, GTP’s proposal is not limited to a particular algorithm as required for computer-implemented functions, and the patent does not disclose any algorithm for performing the claimed function. See Ex. G, ¶ 7.

Thus, because the ’431 Patent does not disclose an algorithm for performing the claimed function, the “means for controlling” limitation is indefinite.

B. “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object” (Claim 7)

Disputes: (1) Is the “computer means” term that uses the word “means” governed by § 112, ¶ 6; and (2) is the structure for analyzing an image to determine position and movement of an object merely a general purpose computer, or must it be limited to disclosed algorithm(s)?

The word “means” in the “computer means” limitation “creates a rebuttable presumption that § 112, para. 6 applies.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). That presumption can be overcome only if “the claim recites sufficient structure for performing the described functions in their entirety.” *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256,

1259 (Fed. Cir. 2008). The claim here does not recite any structure for performing the function apart from the “computer” prefix. But a computer by itself, without additional software, is not sufficient structure for analyzing an image to determine information concerning a position or movement of an object positioned by a user. Ex. F, ¶¶ 59–63; *see also T-Netix, Inc. v. Glob. Tel*Link Corp.*, No. 2:01-CV-189, 2003 WL 25782759, at *9 (E.D. Tex. Aug. 15, 2003) (“In order to perform the functions described, the computer must have software to become a functioning computer means.”). Even GTP’s initial alternative construction acknowledged that certain special programming is required.³ Moreover, in arguing over prior art during prosecution of a parent application, the applicant argued at length that a “computer means” term was means-plus-function and called it “absurd” for the examiner to fail to treat it as such:

By making this last statement, the examiner has in effect refused to give any patentable weight to the ‘function’ part of the computer ‘means.’ Such is contrary to 35 USC § 112, 6th ¶, as well as various sections of the MPEP and long established case law. As well appreciated, § 112, 6th ¶ specifically authorizes the use of ‘means or step plus function’ limitations in a claim. And when such limitations are used, it would be absurd to then ignore the ‘function’ portion as ‘only representing intended use’ as the examiner has done with the present claims.

Ex. H (App. No. 10/893,534 Apr. 24, 2008, Notice of Appeal) at 2; *see also* Ex. I (App. No. 10/893,534 Jan. 24, 2008, Final Rejection) at 2. As in the ’431 Patent, the “computer means” in the parent application included functions for analyzing an image obtained by a camera to determine position and movement information. Ex. J (App. No. 10/893,534, Oct. 29, 2007 Args.), Claim 9.

GTP does not dispute that a computer without special programming is insufficient structure for analyzing an image to determine position or movement of an object. Rather, GTP now alleges

³ GTP originally proposed that if “computer means” is found to be means-plus-function, then the corresponding structure is “a computer with at least one microprocessor specially programmed programed [*sic*] to determine information concerning a position or movement of said object.”

that “[t]he claimed function is ‘analyzing to determine,’” and argues that a computer can “analyze to determine.” The function, however, is expressly recited as “analyzing ***an image*** to determine ***information concerning a position or movement of said object***.” As noted, GTP’s initial proposal acknowledged that special programming is required for this function. Thus, the presumption is not rebutted and the “computer means” term is means-plus-function. *See Catch Curve, Inc. v. Venali, Inc.*, No. CV 05–4820, 2007 WL 3308101, at *10 (C.D. Cal. May 11, 2007) (finding “computer means” to be means-plus-function); *Verizon Cal., Inc. v. Ronald A. Katz Tech. Licensing, L.P.*, 326 F. Supp. 2d 1060, 1101–02 (C.D. Cal. 2003) (same); *Brown v. Baylor Healthcare Sys.*, No. H-08-0372, 2009 WL 1011186, at *5–8 (S.D. Tex. Apr. 15, 2009) (finding “portable computer means” to be means-plus-function); *Custom Media Techs. LLC v. Comcast Cable Commc’ns LLC*, Nos. 13-1421, 13-1424, 2015 WL 4743671, at *7–8 (D. Del. Aug. 11, 2015) (finding “user computer means” to be means-plus-function).

Because the “computer means” recites a computer-implemented function, the structure is limited to the algorithms disclosed and clearly linked to the function in the specification. *Harris*, 417 F.3d at 1253. The *Katz* exception does not apply because analyzing an image to determine a position or movement of an object positioned by a user cannot be performed by a general purpose computer without special programming, as GTP’s initial proposal acknowledged. *Ex. F*, ¶¶ 59–63; *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (algorithm not required only where computer can perform claimed functions “without special programming”). Although GTP changed its tune in its opening brief to avoid limiting the claim to the disclosed algorithms, GTP’s inconsistent positions undermine its reliance on the *Katz* exception. GTP’s original alternative construction was also insufficient, as it parroted a construction the Federal Circuit rejected. *See Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*,

521 F.3d 1328, 1332–34 (Fed. Cir. 2008). An algorithm is required for structure here, and only Defendants’ proposal properly limits the structure to the disclosed algorithms. Ex. A at 4:48–62, 6:64–7:14, 7:22–29, 8:25–38, 8:60–9:14; Ex. F, ¶¶ 66–70. Contrary to Plaintiff’s argument (pp. 9–10), the algorithms Defendants identified are directed to the claimed function, not to image capture. *Id.* If Plaintiff’s characterization of these algorithms were correct, there would be no structure clearly linked to the function at all, also rendering the term indefinite.

C. “display function which is controlled” (Claim 9)

Dispute: Is the “display function which is controlled” governed by § 112, ¶ 6?

“When a claim term lacks the word ‘means,’ the presumption [against being means-plus-function] can be overcome and section 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Williamson*, 792 F.3d at 1349. Claim 9 recites a function—controlling a display function—but no structure for performing that function. Ex. F, ¶ 72. GTP’s expert is silent on the issue. This limitation is subject to § 112, ¶ 6.

The ’431 Patent describes controlling a display function in the Figure 9 embodiment via computer-implemented steps, *i.e.*, moving a virtual slider, turning a knob, or throwing a switch on a display based on finger or laser pointer movement that is viewed by a TV camera. Ex. A at FIG. 9, 13:45–14:9. Thus, the corresponding structure for controlling a display function is a computer programmed to perform these steps as described in the specification. Ex. F, ¶¶ 74–77.

D. “sensing means associated with said device” (Claim 1)

Disputes: (1) Is the “sensing means” term, which uses the word “means,” governed by § 112, ¶ 6; and (2) is the structure limited to a camera, or is it any electro-optical sensor?

Use of the word “means” in this term “creates a rebuttable presumption that § 112, para. 6 applies.” *Williamson*, 792 F.3d at 1348. The “sensing” prefix does not impart structure, but refers

only to the function. Ex. F, ¶ 78. In *Koninklijke Philips N.V. v. Asustek Computer Inc.*, No. 15-1125-GMS, 2017 U.S. Dist. LEXIS 106501, at *8 n.16, n.20 (D. Del. July 11, 2017), “said sensing means” was not found to be means-plus-function only because it referred back to its non-means-plus-function antecedent basis, “gravitation-controlled sensor,” rebutting the presumption. There is no parallel here, and thus “sensing means” is a means-plus-function limitation.

The patent describes only a camera to perform the claimed function. Ex. A at 7:22–25, 16:10–15; Ex. F, ¶¶ 80, 84. The patent’s only reference to generic “electro-optical sensors” is that “*suitable* electro-optical sensors” may be used for various functions, thus admitting that not all electro-optical sensors may be used with the invention. Ex. A at 3:15–19, 11:54–61. The patent, however, does not state which are “suitable” and does not link a generic “electro-optical sensor” to the claimed function. Ex. F, ¶¶ 81–83.

E. “means for transmitting information” (Claim 11)

Dispute: Is the structure limited to a “cellular” transmitter, or is it any transmitter?

The parties agree this term is means-plus-function and agree on the function. The parties only dispute the corresponding structure. To narrow the dispute, Defendants herein revise their proposed structure to a “cellular transmitter.” The only remaining aspect of the dispute is whether the transmitter must be cellular. The specification does not expressly disclose any structure in a handheld computer apparatus for transmitting information. Ex. F, ¶ 89. The patent discloses only that a cell phone may transmit an image “over *mobile phone link* 853 to a remote location,” *i.e.*, over a *cellular* connection. Ex. A at 12:66–13:3; Ex. F, ¶¶ 89–91; *see also* Ex. T at 18–19, 24–25, 29–30 (equating “mobile phone link” requirement to feature of a “cellular phone” and alleging such requirement is not met by a handheld device’s transmission unit, ground-based wireless or satellite technology, or a network connection to the Internet). The patent never mentions Bluetooth or Wi-Fi, neither of which were ubiquitous features of cell phones in the 1990s.

F. “a light source for illuminating said object” (Claim 12)

Dispute: Is the claimed “light source” merely any object that emits light, or is it limited by its function to a specific light source that excludes displays?

Claim 12 does not recite just any “light source,” but rather “a light source for illuminating said object.” Defendants seek to clarify how the function (“for illuminating said object”) limits the claimed structure, particularly in view of the intrinsic record clearly distinguishing displays (which GTP contends meets the claimed “light source”) from light sources. *See Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1380–81 (Fed. Cir. 2011) (“memory for storing” and “processor for executing” require specific configuration, not just capability). Specifically, the patent distinguishes a light source from a rear projection TV display. Ex. A at 3:23–43. A display is designed to transmit light onto a screen to display an image, although some light may also incidentally pass through the screen and onto objects in front of it (the familiar glow on a user watching TV in a dark room). But whereas TV display 103 is designed to transmit light onto a screen, the patent describes separate “light sources 110 and 111” (*i.e.*, camera LEDs) designed to transmit light directly onto the object to sufficiently illuminate it for the camera to obtain an image of the object using the reflected light, as claimed. *Id.* at FIG. 1A, 3:30–43; *see also id.* at FIGS. 3C, 4B, 8:4–14, 9:1–8; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1270–73 (Fed. Cir. 2001) (finding claim term “mode” limited by implication as excluding data rates in part because the “specification us[ed] the terms ‘mode’ and ‘rate’ to refer to two different and distinct concepts”). Defendants’ proposal is also consistent with how the ’079 Patent by the same inventor describes a similar light source, as explained in Section IV.B below.

G. “wherein said movement is sensed in 3 dimensions” (Claim 4) / “wherein said information is obtained in 3 dimensions” (Claim 19)

Dispute: Should the meaning of these claim terms be clarified for the jury?

Although cameras are used to take pictures of three-dimensional objects, the information they capture is not always in three dimensions. Ex. A at 3:53–60, 19:19–23 (explaining that cameras can obtain information in 2D or 3D). Defendants’ proposal clarifies what it means for movement and information to be sensed and obtained in three dimensions, consistent with the intrinsic evidence and technical dictionary definitions. *Id.*; Ex. K (The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997)) at 1108; Ex. L (McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994)) at 2025. GTP’s attorney argument as to spherical coordinate systems, on the other hand, is entirely unsupported by the record. Moreover, the three parameters of such systems are defined with respect to three perpendicular axes.

H. “electro-optically sensing” (Claim 1) / “electro-optical sensing” (Claim 2)

Dispute: Should the meaning of these claims terms be clarified for the jury?

GTP proposed these terms for construction, implying there is a need to construe them. Although the patent does not explain what it means to “electro-optically sense” light, Defendants’ proposal reflects how “electro-optic” terms are defined by technical dictionaries and would clarify this technical term for the benefit of the jury. *See* Ex. K at 349; Ex. L at 665–66.

III. ’924 PATENT

A. “oriented to view” (Claim 1)

Dispute: Is the orientation of the cameras a present structural configuration, or merely the capability of the cameras to be later oriented to view the subject?

Defendants seek to construe this limitation to clarify that it describes a present structural configuration, namely that the camera is positioned such that the subject (a user or an object other than the user) is currently within the camera’s field of view, not merely that the camera may later be oriented to view the subject. Although GTP agrees this term at least “describ[es] the direction in which the . . . camera is facing,” Dkt. 68 at 17, it can often be unclear whether a camera is facing

a subject directly enough to be “oriented to view” the subject. Defendants’ proposal makes it much easier for the jury to determine whether there is infringement, as many cameras (including those in the accused products) have a viewfinder allowing one to see exactly what is in the camera’s field of view, and thus what the camera is oriented to view.

Claim 1 recites first and second cameras having non-overlapping fields of view. The first camera is oriented to view a user, whereas the second camera is oriented to view an object other than the user. The patent explains that a camera is oriented to view a user at whom it is pointed, and may be rotated if needed: “Consider hand held computer 1901 of FIG. 18, incorporating a camera 1902 which can optionally be rotated about axis 1905 so as *to look* at the user or a portion thereof such as finger 1906, or at objects *at which it is pointed*.” Ex. B at 25:40–63; *see also id.* at 25:64–26:5 (“The camera 1902 (and 1910 if used, and if desired), can also optionally be rotated and used *to view points in space ahead of the device*, as shown in dotted lines 1902a. *In this position* for example it can be used for the purposes described in the previous application.”). For example, the patent explains that “[w]hen aimed at the user, as shown, [the camera 1902] can be used, for example, *to view* and obtain images of: Ones self . . . Ones fingers . . . Ones gestures.” *Id.* at 25:40–63. The patent further explains that “[t]he camera can also be used *to see* gestures of others, as well as *the user*, and to acquire raw video images of objects *in its field*.” *Id.* at 26:25–27. In the only two-camera embodiment, the patent explains that one camera *is looking* at the wall display, while the other *is looking* at the user: “Also can have two cameras operating together, *one looking at wall thing, other at you* (as 1902 and 1902a) . . .” *Id.* at 26:36–40.

The patentee also used Defendants’ proposal to describe the orientation of the cameras in a child application of the ’924 Patent: “a first camera *having a field of view encompassing* at least

a portion of the first person” and “a second camera *having a field of view encompassing* at least a portion of the second person.” Ex. M (App. No. 13/714,755) at Claim 1.

The orientation limitations cannot be read as describing mere capability. Any camera in a handheld device is capable of being oriented to view a user if the device is rotated or the user moves in front of the camera. To read this limitation as describing mere capability would render the orientation language superfluous. *See Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.” (citation omitted)). Further, the claim recites that each camera is “oriented” relative to a user, not just “orientable.” The patentee thus chose language describing the present configuration of the device rather than how it is capable of being configured by a user. For example, the patentee could have claimed the camera as being “operable” to view a user or object, as shown from the patentee’s use of the phrase “operable to” in Claims 6 and 7, but chose instead to claim the camera as being “oriented” to view a user or object.

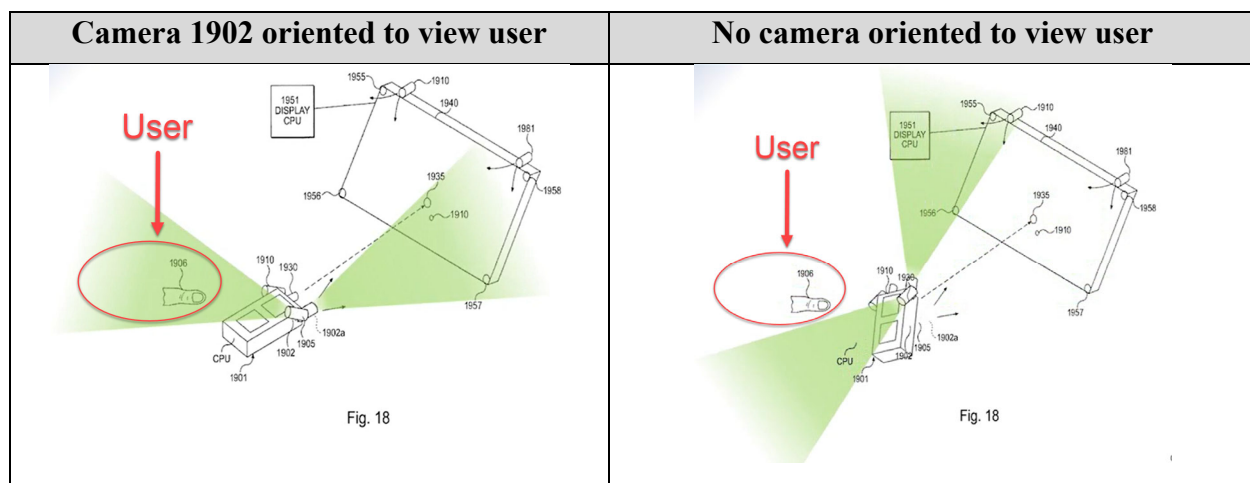
B. “oriented to view a user” (Claim 1) / “oriented to view an object other than the user” (Claim 1)

Dispute: Is a claim term defining the orientation of a camera relative to a user, requiring a user to actually use the device and orient the camera to view herself, indefinite under *IPXL*?

The Federal Circuit has held that an apparatus claim requiring a user to use the apparatus is indefinite. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005) (“[I]t is unclear whether infringement of [the claim] occurs when one creates a system that allows [a] user to [use an input means], or whether infringement occurs when the user actually uses the input means”); *see also In re Katz*, 639 F.3d at 1318 (finding “interface means for providing automated voice messages . . . to certain of said individual callers, wherein said certain of said individual callers digitally enter data” indefinite); *H-W Tech., L.C. v. Overstock.com, Inc.*, 758

F.3d 1329, 1335 (Fed. Cir. 2014) (finding “wherein said user completes a transaction” and “wherein said user selects one of said variety of offers” indefinite).

Claim 1 of the '924 Patent is an apparatus claim with limitations requiring a method of using the claimed device. Claim 1 recites a “handheld device” comprising “a first camera *oriented to view a user* of the handheld device” and “a second camera *oriented to view an object other than the user* of the device.” The orientations of the first and second cameras are described *in relation to the user* (as opposed to another component in the device). Whether the camera is oriented to view a user cannot be determined until a user actually uses the device in a particular way. If the user faces a camera on the device towards her, the “first camera” is oriented to view the user. But if the user rotates or flips the device such that no camera is facing her, the “first camera” limitation is not met because the camera is not oriented to view the user, as illustrated below in annotated Figure 18 of the patent. The fact that the same device may satisfy the first camera’s orientation requirement in some use cases but not others, depending from moment to moment on how the user chooses to hold and direct the device, shows that infringement requires user action.



That the '924 Patent orientation limitations require method steps, and not just structural capability, is further understood from the contrast with Claim 11 of the related '079 Patent, which claims the orientation of a camera as a structural feature rather than one that requires a particular

use by a user. Specifically, Claim 11 of the '079 Patent recites a camera oriented to observe a gesture in a work volume defined as “generally above” a light source with which the camera is “in fixed relation.” Unlike Claim 1 of the '924 Patent, the orientation of the camera in Claim 11 of the '079 Patent is described in relation to other components. The orientation as recited in Claim 11 of the '079 Patent is thus a structural feature that does not require user action, in contrast with the orientation recited in Claim 1 of the '924 Patent (“oriented to view a user”) that requires a user to use the claimed device in a particular way.

Similar claims have been found indefinite under *IPXL* in this district. In *Ultimate Pointer, L.L.C. v. Nintendo Co.*, No. 6:11-cv-496-LED, 2013 WL 2325118, at *22–23 (E.D. Tex. May 28, 2013), the Court found that a claim for “a pointing device for controlling a feature on an image generated by a computer” was indefinite under *IPXL* for “requir[ing] the user to direct the handheld enclosure between two points, effectively requiring the user to use the pointing device.” The claim at issue recited “a sensing device for generating first data indicative of a first spatial state of said enclosure **while the pointing line is directed at a first calibration point**, said first calibration point having a predetermined relation to the image, and for generating second data indicative of a second spatial state of said enclosure **while the pointing line is directed at a non-calibration point on the image**” and controlling the image “based on the relation between the first spatial state and the second spatial state.” *Id.* at *22. The defendant argued that a user had to use the pointing device for the sensing device to generate data “while the pointing line is directed at a . . . calibration point,” and thus the claim was indefinite. *Id.* The plaintiff argued that the claim merely recited the capability to generate data indicative of spatial states while the pointing line is directed at certain points. *Id.* The Court agreed with the defendant that “[t]he clause at issue does not define the function of the sensing device,” which was “simply to generate data indicative of the spatial

state of the handheld enclosure.” *Id.* at *23. Since the claim recited controlling a feature based on the relation between the two spatial states and “[t]he relation between the spatial states depends on data generated ‘while the pointing line is directed at a . . . calibration point,’” the claim “requires the user to direct the handheld enclosure between two points, effectively requiring the user to use the pointing device,” and was therefore indefinite under *IPXL*. *Id.*

The claim invalidated in *Ultimate Pointer* is on all fours with the claim at issue here:

Ultimate Pointer claim	'924 Patent, Claim 1
Pointing device	Handheld device
For controlling a feature on an image generated by a computer based on two spatial states	For controlling a function of the device using a computer based on two camera outputs
Spatial state #1: pointing at a calibration point	Camera #1: oriented to view a user
Spatial state #2: pointing at a non-calibration point	Camera #2: oriented to view an object other than a user
Requires a user to direct the handheld enclosure between two points in order to generate data relating to the two spatial states	Requires a user to direct the handheld device's first camera at herself in order for the first camera to be oriented to view a user

And while the Court in *Ultimate Pointer* found other claims not invalid under *IPXL*, those claims resemble Claim 11 of the '079 Patent in reciting structural capability; none of those claims recite a user-dictated orientation like Claim 1 of the '924 Patent.

Claim 1 of the '924 Patent thus impermissibly mixes an apparatus and a method of using the apparatus, just as in *IPXL*, such that the claim is indefinite.

C. “wherein the gesture is performed by a person other than the user of the handheld device” (Claim 9)

Dispute: Is an apparatus claim requiring a user to perform a gesture indefinite under *IPXL*?

This claim limitation is indefinite under *IPXL* because it recites a method step (“a gesture *is performed* by a person other than the user”) within an apparatus claim. Claim 9 does not merely recite the capability of determining a gesture. Claim 6 from which Claim 9 depends already does that: “wherein the computer is operable to determine a gesture based on at least one of the first

camera output and the second camera output.” Claim 9 further expressly specifies that the gesture *is performed* by a specific person, thereby reciting a method step. GTP admits, as it must, that the claim “is describing that the gesture detected by the computer *is performed by a user* other than the user of the handheld device.” This “wherein” clause is no different in substance from the one held indefinite in *In re Katz*, 639 F.3d at 1318, which recited an “interface means for providing automated voice messages . . . to certain of said individual callers, *wherein said certain of said individual callers digitally enter data.*”

D. “a computer within the housing . . . adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output” (Claim 1)

Dispute: Is a “computer” term that does not recite operations or connections for achieving its objective of controlling a handheld device based on camera outputs subject to § 112, ¶ 6?

The presumption against finding a term means-plus-function can be overcome, and § 112, ¶ 6 will apply, when the term fails to “recite sufficiently definite structure” or recites “function without reciting sufficient structure for performing that function.” *Williamson*, 792 F.3d at 1349 (citation omitted). As the Federal Circuit has made clear, “the typical physical structure that implements software, a computer, cannot be relied upon to provide sufficiently definite structure for a software claim lacking ‘means.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (overruled on other grounds). Here, the claim does not recite sufficient structure for performing the claimed function, or those recited in the dependent claims, because “a computer” without the necessary software is not capable of performing those functions. Ex. F, ¶¶ 92–95.

As discussed above, the applicant explained during prosecution of the related ’431 Patent that “computer means” is a means-plus-function limitation, and thus the “computer” prefix does not provide sufficient structure. Ex. H at 2. Although the presumption of means-plus-function does not apply here, the applicant’s logic holds no less true. As in *St. Isidore Research, LLC v.*

Comerica Inc., No. 2:15-cv-1390-JRG-RSP, 2016 WL 4988246, at *14 (E.D. Tex. Sept. 19, 2016), where a processor term was found to be means-plus-function, the “computer” term here “is defined only by the function that it performs.” The claim does not describe the computer’s operations, specifically how it uses the camera outputs to control the handheld device. Nor does the claim recite structural connections between the computer and other components. Placing the computer “within the [device] housing” does not change its purely functional, black-box nature.

GTP’s argument that “a computer,” by itself, recites sufficient structure is undermined by claim language requiring that “a computer” is either “*adapted*” or “*operable*” to perform functions that are not basic computer functions. Ex. F, ¶¶ 92–93. Nor would finding the limitation here means-plus-function render all computer terms means-plus-function, as GTP argues. This Court has found “computer” and “processor” terms not to be means-plus-function in instances where the claims include structural details of those components. *See, e.g., St. Isidore*, 2016 WL 4988246, at *14 (holding certain “processor” terms not governed by § 112(6) when the claim “detail[s] the objectives and operations” of the processor). There are no such structural details provided here, and thus this limitation is subject to § 112, ¶ 6. *See, e.g., Pers. Audio, LLC v. Apple, Inc.*, No. 9:09CV111, 2011 WL 11757163, at *22 (E.D. Tex. Jan. 31, 2011) (finding processor term to be means-plus-function); *GoDaddy.com, LLC v. RPost Commc’ns Ltd.*, No. CV-14-00126-PHX-JAT, 2016 WL 212676, at *52–57 (D. Ariz. Jan. 19, 2016), *aff’d on other grounds*, 685 F. App’x 992 (Fed. Cir. 2017) (same); *Rovi Guides, Inc. v. Comcast Corp.*, No. 16-CV-9278 (JPO), 2017 WL 3447989, at *22–23 (S.D.N.Y. Aug. 10, 2017) (same); *Velocity Pat. LLC v. Mercedes-Benz USA, LLC*, No. 13-CV-8413, 2016 WL 5234110, at *5–7 (N.D. Ill. Sept. 21, 2016) (same); *Syneron Med. Ltd. v. Invasix, Inc.*, No. 8:16-cv-00143-DOC-KES, 2018 WL 4696971, at *12 (C.D. Cal. Sept. 5, 2018) (same); *Parity Networks, LLC v. ZyXEL Commc’ns, Inc.*, No. SACV 20-

697JVS(KESx), 2020 WL 8569299, at *10 (C.D. Cal. Dec. 22, 2020), *reconsideration denied sub nom. Parity Networks, LLC v. ZyXEL Commc'ns, Inc.*, No. SACV 20-697JVS(KESx), 2021 WL 545282 (C.D. Cal. Jan. 26, 2021) (same).

As this limitation is subject to § 112, ¶ 6, and GTP does not dispute that no corresponding algorithm is disclosed in the specification, it is indefinite. Ex. F, ¶¶ 96–97.

E. “gesture” (Claims 6, 9)

Disputes: (1) Should a term whose plain and ordinary meaning is disputed by the parties be construed; and (2) does a “gesture” require movement that conveys a meaning?

Defendants seek to clarify the plain meaning of “gesture” because GTP’s infringement contentions accuse features that merely involve scanning a stationary object, such as iris scanning, of somehow detecting a gesture. As the parties dispute the term’s scope, *i.e.*, whether it requires movement that conveys a meaning, it should be construed. *O2 Micro*, 521 F.3d at 1361–62.

It is well understood that a gesture requires movement, and the specification confirms that is the meaning intended here. The patent explains that a gesture is a sequence of positions, *i.e.*, a particular type of movement. Ex. B at 20:5–10 (“This can also include a sequence of positions, itself constituting the gesture.”). The patent also distinguishes gestures from expressions that do not require movement, such as facial expressions (*e.g.*, a smile). *Id.* at 22:9–12 (“In this case, it is facial expressions, hand or body gestures that are the thing most used.”), 25:40–63 (describing “ones self—facial expressions” separately from “ones gestures”); *compare* Claim 6 (“operable to determine a gesture”) *with* Claim 7 (“operable to determine a facial expression”). But not just any movement constitutes a gesture. For example, walking is movement but not a gesture. What distinguishes a gesture from other movement is that it conveys a meaning to an observer. For example, nodding one’s head is a gesture that conveys approval.

Dictionaries similarly define a gesture as a body movement that conveys meaning. Ex. N (The Concise Oxford Dictionary of Current English (Ninth Edition, 1995)) at 568 (“gesture . . . 1 a movement of a limb or the body as an expression of thought or feeling.”); Ex. O (Merriam-Webster’s Collegiate Dictionary (Tenth Edition, 1995)) at 489 (“gesture . . . 2 : a movement usu. of the body or limbs that expresses or emphasizes an idea, sentiment, or attitude 3 : the use of motions of the limbs or body as a means of expression.”). Defendants’ proposal is also consistent with the disclosures of other asserted patents by the same inventor. *See* Sections IV.A, V.A.

F. “adapted to” (Claims 1, 3–5, 8, 10, 12, 14)

Dispute: Should “adapted to” be construed consistent with Federal Circuit precedent to require a particular design or configuration rather than mere capability?

The Federal Circuit has stated, “In common parlance, the phrase ‘adapted to’ is frequently used to mean ‘made to,’ ‘designed to,’ or ‘configured to,’ but it can also be used in a broader sense to mean ‘capable of’ or ‘suitable for.’” *Aspex Eyewear Inc. v. Marchon Eyewear Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012); *see also In re Giannelli*, 739 F.3d 1375, 1379–80 (Fed. Cir. 2014) (construing “adapted to” as “designed or constructed to,” not “capable of”); *Barkan Wireless IP Holdings, L.P. v. Samsung Elecs. Co.*, No. 2:18-CV-28-JRG, 2019 WL 497902, at *39–40 (E.D. Tex. Feb. 7, 2019), *report and recommendation adopted*, No. 2:18-CV-28-JRG, Dkt. 118 (E.D. Tex. Mar. 5, 2019) (“adapted to” means “configured to,” not “capable of”). The narrower meaning applies here, as shown by the patentee’s use of “adapted to” in lieu of the “operable to” phrase used in Claims 6 and 7. A computer designed to perform a function must be specifically “programmed to” perform it. *See Nevro Corp. v. Boston Sci. Corp.*, 955 F.3d 35, 42 (Fed. Cir. 2020). Further, the one case GTP cites (*Profectus*) was distinguished by this Court since the parties there “did not dispute whether ‘adapted to’ encompassed mere capability rather than actual configuration.” *Barkan*, 2019 WL 497902, at *40.

IV. '079 PATENT

A. “gesture” (Claims 1, 4–5, 11, 18–21, 24–25)

Dispute: (1) Should a term whose plain and ordinary meaning is disputed by the parties be construed; and (2) does a “gesture” require movement that conveys a meaning?

As with the '924 Patent, the '079 Patent uses the term “gesture” to refer to “a sequence of positions that conveys a meaning.” The patent describes gestures as comprising movement. Ex. C at 2:54–64 (“Alternatively, finger position data can be used to determine gestures such as pinch or grip, and other examples of relative juxtaposition of objects with respect to each other, as has been described in co-pending referenced applications”), 3:48–51 (“*Finger gestures comprising a sequence of finger movements* can also be detected by analyzing sequential image sets such as the motion of the finger, or one finger with respect to another such as in pinching something can be determined.”), Claims 5, 18–20, 25 (dependent claims limiting the gesture to certain movements, such as pinching, pointing, or gripping). The patent also describes gestures as conveying meaning. *Id.* at 5:23–39 (“There are many gestures of babies apparently indicated in child psychology *as being quite indicative of various needs, wants, or feelings and emotions, etc.*”). Dictionaries also support Defendants’ proposal as explained for the '924 Patent, as do the disclosures of other asserted patents by the same inventor. *See* Sections III.E, V.A.

B. “light source adapted to direct illumination through a work volume above the light source” / “light source adapted to illuminate a human body part within a work volume generally above the light source” / “light source in fixed relation relative to the camera and adapted to direct illumination through the work volume” (Claims 1–3, 9–11, 14–15, 21–23, 30)

Dispute: Is the claimed “light source” merely any object that emits light, or is it limited by its function to a specific light source that excludes displays?

Similar to the '431 Patent, the '079 Patent claims do not recite just any “light source,” but rather a light source adapted to direct illumination through a work volume or to illuminate a human

body part in a work volume. The '079 Patent also distinguishes the claimed light source from a display. For example, while Claim 11 recites a computer apparatus having a particular light source, Claim 12, which depends from Claim 11, recites that the apparatus “*further* includ[es] a display” separate from the light source. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct component[s]’ of the patented invention.” (citation omitted)). The claimed light source must illuminate a work volume above the light source, whereas the work volume is in front of the display and above the keyboard (also recited in Claim 12) such that the light source would be in the keyboard and not the display, as depicted in Figure 1 of the patent (see coaxial light sources 210 and 211). Ex. C at FIG. 2, 4:4–14. The specification also consistently distinguishes the claimed light source from a display. *Bell Atl.*, 262 F.3d at 1270–73. Figures 1, 2, and 3 depict light sources 122, 210, and 211 that are separate from display screen 107. *Id.* at FIGS. 1, 2, 3, 4:4–14; *see also* 4:15–28. Similar patents and applications by the same inventor also distinguish a light source from a display. *See* Ex. P (U.S. Patent No. 8,405,604) at 53:47–54 (describing “light source” and “display” as separate components); Ex. Q (U.S. Patent App. No. 11/349,350 Prosecution History, May 12, 2010 Pre-Appeal Brief Request for Review) at 2 (distinguishing “optical source” from a flat panel display in overcoming prior art). Moreover, the term “adapted to” connotes more than the mere capability of directing illumination through the work volume to illuminate a body part, but requires something structurally designed to do so, consistent with the patent distinguishing a light source from a display.

C. “a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output” (Claim 11)

Dispute: Is a “processor” term that does not recite operations or connections for achieving its objective of determining a gesture subject to § 112, ¶ 6?

Similar to the '924 Patent “computer” term, the '079 Patent “processor” term fails to recite sufficient structure for performing the claimed, software-implemented function. *Williamson*, 792 F.3d at 1349. A processor by itself is not sufficient structure for that function. *Apple*, 757 F.3d at 1298; Ex. F, ¶¶ 98–100. Here, like in *St. Isidore*, the processor “is defined only by the function that it performs.” *St. Isidore*, 2016 WL 4988246, at *14. The objective of the processor is “to determine the gesture performed” This language is purely functional and fails to describe the operations of the processor for achieving that objective or its structural connections.

Determining a gesture based on analysis of an image requires software steps that are not recited in the claim. Ex. F, ¶ 98; *Apple*, 757 F.3d at 1298. GTP and its expert ignore this requirement, contending that only the capability of being programmed to perform the function is required. *See* Ex. E, ¶ 78. But that places no structural limitation on the processor, as any processor can be programmed as such; it also ignores the “adapted to” claim language, which further highlights the functional nature of the processor. As discussed above for the '924 Patent “computer” term, several other courts have found similar processor terms subject to § 112, ¶ 6. The processor term here is likewise subject to § 112, ¶ 6.

The cases GTP cites are inapt because in each case, the claim in question described the processor’s operations and how it functions with respect to other claimed components. *See, e.g., Optis Cellular Tech., LLC v. Kyocera Corp.*, No. 2:16-cv-0059-JRG-RSP, 2017 WL 541298, at *25 (E.D. Tex. Feb. 8, 2017) (claimed processor connected to storage unit, transmit buffer, and transceiver). Not so here. Claim 11 does not mention connections between the processor and other claimed components, and neither does the remainder of the specification. Ex. F, ¶ 99.

As this limitation is subject to § 112, ¶ 6, and GTP does not dispute that the specification fails to disclose a corresponding algorithm, it is indefinite. *See also* Ex. F, ¶¶ 101–106.

D. “the first and second cameras” (Claim 26)

Dispute: Should this term be found indefinite for lack of antecedent basis where no second camera is elsewhere recited and GTP has not argued otherwise?

Neither Claim 26 nor Claim 21 from which it depends recites a second camera. Claim 21 only recites a single camera. It is thus entirely unclear what “the . . . second camera[]” recited in Claim 26 refers to, if anything. GTP and its expert say nothing about this term despite attempting to address the antecedent basis issues for other terms. Thus, “the first and second cameras” term is indefinite for lack of antecedent basis. *See Bushnell Hawthorne, LLC v. Cisco Sys., Inc.*, 813 F. App’x 522, 526 (Fed. Cir. 2020).

E. “adapted to” (Claims 1, 11, 21)

Dispute: Should “adapted to” be construed consistent with Federal Circuit precedent to require a particular design or configuration rather than mere capability?

As with the ’924 Patent and for the same reasons, “adapted to” should be construed to have its narrower meaning of “designed to,” and a processor designed to perform a function is one specifically programmed to perform the function. *Aspex Eyewear*, 672 F.3d at 1349; *In re Giannelli*, 739 F.3d at 1379–80; *Nevro*, 955 F.3d at 42; *Barkan*, 2019 WL 497902, at *39–40.

F. “three-dimensional position” (Claims 8, 28)

Dispute: Should the meaning of this claim term be clarified for the jury?

As with the ’431 Patent, Defendants seek to clarify what is meant by a three-dimensional position. Ex. C at 8:63–67; Ex. K at 1108; Ex. L at 2025. The same arguments presented above apply here and dictate the same result. *See* Section II.G.

G. “work volume above the light source” / “work volume generally above the light source” / “work volume above the camera” (Claims 1, 6–7, 11–12, 21)

Dispute: Should the meaning of this claim term be clarified for the jury?

Defendants seek to clarify the meaning of “work volume,” a term whose meaning is not readily apparent. It is clear from the plain language that a “work volume” is not just any volume. The claims make clear that a “work volume” is the volume in which gestures are performed and observed by the camera. Ex. C at Claims 1, 11, 21. Further, the specification consistently describes a work volume in the same manner, specifically as a volume in which the cameras’ fields of view overlap and in which a finger performing gestures is typically located. *Id.* at FIGS. 1, 2, cols. 2:39–48, 3:4–20, 3:56–61, 4:29–40, 5:14–21.

Similar patents by the same inventor describe a “work volume” in the same way. Ex. P at FIG. 1c, cols. 9:41–67 (“working volume” is “the region on and above the desk top in this case where the sensor system can operate effectively”), 10:43–45, 57:64–67 (“target volume” is “the volume of space (usually a rectangular solid volume) visible to a video camera or a set of video cameras within which a target will be acquired and its position and/or orientation computed”); Ex. R (U.S. Patent No. 6,545,670) at FIG. 1, col. 3:46–51. Absent the clarification provided by Defendants’ proposal it will be very difficult for the jury to determine whether infringement has occurred, warranting construction of this term.

V. ’949 PATENT

A. “gesture” (Claims 1–3, 8–10, 13–15)

Dispute: (1) Should a term whose plain and ordinary meaning is disputed by the parties be construed; and (2) does a “gesture” require movement that conveys a meaning?

As with the ’924 and ’079 Patents, the ’949 Patent uses “gesture” to refer to “a sequence of positions that conveys a meaning.” The patent describes a gesture as comprising a sequence of positions. Ex. D at 6:50–7:10 (“The sequence of frames of this activity (a ‘gesture’ of sorts by both parties) is recorded, and the speed of approach, the head positions and any other pertinent

data determined.”). The patent distinguishes gestures from poses, and only describes “a sequence of poses” as constituting a gesture:

In general, one can use the system to automatically “shoot” pictures for example, when any or all of the following occur, as determined by the position and orientation determining system of the camera of the invention:

1. Subject in a certain pose.
2. Subject in a sequence of poses.
3. Portion of Subject in a sequence of poses (e.g. gestures).
4. Subject or portion(s) in a specific location or orientation.
5. Subject in position relative to another object or person.

For example, this could be bride and groom kissing in a wedding, boy with respect to cake on birthday, and sports events sequences of every description (where the camera can even track the object datums in the field and if desired adjust shutter speed based on relative velocity of camera to subject).

6. Ditto all of above with respect to both persons in certain poses or gesture situations.

7. When a subject undertakes a particular signal comprising a position or gesture—i.e. a silent command to take the picture (this could be programmed, for example, to correspond to raising one’s right hand).

Id. at 5:30–49; *see also id.* at Claims 3, 10, 15 (dependent claims requiring that the gesture “**includes** a pose,” not that the gesture *is* a pose, consistent with the specification disclosure that a gesture may be a **sequence** of poses). The patent also describes position, movement, and gesture separately, further showing that a gesture is not just a position or movement, but requires more (*i.e.*, a sequence of positions **that conveys a meaning**). *Id.* at 12:64–13:5 (“This allows one to use a very large format camera in a fixed location (e.g. 5000×5000 pixels) to cover the image of the whole stage via suitable optics, but to only take and store the pixels in a 1000×700 zone of interest **movement, or positional or gesture** interest for example, providing a 35 times increase in the frame rate needed today with such large pixel cameras.”). Moreover, during prosecution the examiner noted that when “an object image is a human being, **his movements are considered as gestures** since the term ‘gesture’ is not clearly defined in the claim.” Ex. S (’949 Patent Prosecution History, May 14, 2014 Final Rejection) at 2. Dictionaries also support Defendants’ proposal as explained above for the ’924 Patent, as do the disclosures of other asserted patents by the same inventor. *See* Sections III.E, IV.A. Defendants’ proposal should be adopted.

B. “forward facing portion” (Claims 1, 8, 13) / “forward facing light source” (Claims 5, 16)

Dispute: Are these terms indefinite where it is unclear which side of the claimed device housing is “forward facing,” especially where GTP is accusing both sides of the accused products as the “forward facing portion”?

GTP’s opening brief demonstrates why these terms—which are not in the specification—are indefinite. GTP writes that the terms refer “to a certain side of the claimed apparatus.” Dkt. 64 at 24. While this may be true, it does not resolve the ambiguity. GTP does not (and cannot) explain how one would determine which “certain side” is “forward facing.” For example, for a device that has two sets of digital cameras and/or sensors that point in opposite directions, it is impossible to determine which cameras and/or sensors are in the “forward facing” portion of the device. Adding to the confusion, devices (including certain accused products) may be “foldable” where a portion of the device housing that was facing one side later faces another side after the device is folded or unfolded. It is unclear what would be the “forward facing” portion of such devices. The intrinsic evidence does not help, as the specification never uses “forward facing,” and there is no discussion in the prosecution history. This ambiguity is only confirmed by GTP’s infringement contentions, which allege *both sides* of the accused products are the “forward facing portion,” even though GTP now acknowledges the term refers to “a certain side.”

Because the boundaries of the claims are unclear absent a clear explanation for what is meant by “forward facing,” which is lacking in the intrinsic record or otherwise, these limitations are indefinite. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901–02 (2014).

C. “the detected gesture is identified by the processing unit apart from a plurality of gestures” (Claim 13)

Dispute: Should this term be found indefinite for lack of antecedent basis where it is unclear which of two detected gestures is being referenced?

This term is indefinite for lack of antecedent basis because it is unclear whether “the detected gesture” refers to the gesture detected by the sensor (“a sensor adapted to detect a gesture”) or, instead, the gesture detected by the processing unit (“wherein the processing unit is adapted to: detect a gesture”). Ex. F, ¶¶ 119–20. The claim elsewhere specifies which detected gesture is referenced for other limitations (“correlate the gesture detected by the sensor”), but fails to do so with respect to “the detected gesture.” GTP fails to explain why “the detected gesture” refers to the gesture detected by the sensor rather than the processing unit. On one hand, the claim recites “the gesture detected by the sensor” in the preceding clause, suggesting that the detected gesture may refer to the one detected by the sensor. But on the other hand, the term is found within the function of the “processing unit” limitation, such that it could equally refer to the gesture detected by the processing unit in the preceding functional step.

This term is also indefinite because it is unclear what it means to identify a gesture that has already been detected apart from a plurality of other gestures. Ex. F, ¶ 118.

D. “the electro-optical sensor” / “the electro-optical sensor field of view” (Claim 13)

Dispute: Should this term be found indefinite for lack of antecedent basis where it is unclear whether the term refers to the sensor, the digital camera, or something else?

These terms are indefinite because it is unclear whether “the electro-optical sensor” refers to “a digital camera,” “a sensor,” or something else. On one hand, the commonality of the word “sensor” suggests that “the electro-optical sensor” refers to “a sensor.” But on the other hand, not all sensors are electro-optical sensors. Further, the claim recites that the processing unit detects a gesture in “the electro-optical sensor field of view based on an output of the electro-optical sensor.” Only the digital camera is claimed as “having a field of view.” The sensor detects a gesture in the camera’s field of view, whereas the processing unit detects a gesture in the electro-optical sensor’s

field of view, which suggests that the sensor and electro-optical sensor are different. Moreover, the patentee's usage of the phrases "the sensor" and "the digital camera" elsewhere in the claim and in dependent claims adds further ambiguity because the patentee knew how to reference "the sensor" and "the digital camera," suggesting that "electro-optical sensor" might not refer to either one but instead to some other structure. Contrary to GTP's argument, nothing in the claim describes the "electro-optical sensor" as detecting a gesture.

E. "processing unit" terms (Claims 1, 8, and 13)

Dispute: Are "processing unit" terms that do not recite the operations for achieving their objective of determining a gesture subject to § 112, ¶ 6?

Similar to the '924 Patent "computer" term and the '079 Patent "processor" term discussed above, the processing unit terms in the '949 Patent fail to recite sufficient structure for performing the claimed functions. *Williamson*, 792 F.3d at 1349. A processor itself is not sufficient structure for performing these software-implemented functions. *Apple*, 757 F.3d at 1298; Ex. F, ¶¶ 107–09. Here again, like in *St. Isidore*, the "processing unit" terms are "defined only by the function that [they] perform[]." *St. Isidore*, 2016 WL 4988246, at *14. The claims in this instance fail to specify the operations of the processor for achieving the objective of "detect[ing] a gesture has been performed." The claims are therefore subject to § 112, ¶ 6.

This case is unlike *Huawei Technologies Co. v. T-Mobile US, Inc.*, No. 2:16-CV-00056-JRG-RSP, 2017 U.S. Dist. LEXIS 79836, at *71 (E.D. Tex. May 24, 2017), where the Court did not find a processing unit term to be means-plus-function because the Court construed it as a specific type of processor known to connote structure for performing the claimed functions: "processor of a Mobility Management Entity (MME) or a Serving GPRS Support Node (SGSN)." In contrast here, the '949 Patent does not describe any specific "processing unit," nor has GTP proposed construing the processing unit as any specific processor known for detecting gestures.

And unlike in *Samsung Electronics America, Inc. v. Prisia Engineering Corp.*, 948 F.3d 1342, 1347–50 (Fed. Cir. 2020), where neither party contended the “digital processing unit” limitation was means-plus-function (the PTAB decided the issue *sua sponte*), and the limitation included a detailed seven-step algorithm, Defendants here contend this term is means-plus-function and that the claims do not recite any algorithm, but merely recite the function of determining a gesture and controlling a digital camera or correlating the gesture with an image capture command.

As this limitation is subject to § 112, ¶ 6, and GTP does not dispute that the specification fails to disclose a corresponding algorithm, it is indefinite. *See also* Ex. F, ¶¶ 110–11.

F. “adapted to” (Claims 1, 13)

Dispute: Should “adapted to” be construed consistent with Federal Circuit precedent to require a particular design or configuration rather than mere capability?

As with the ’924 Patent and for the same reasons, “adapted to” should be construed to have its narrower meaning of “designed to,” and a processor designed to perform a function is one specifically programmed to perform the function. *Aspex Eyewear*, 672 F.3d at 1349; *In re Giannelli*, 739 F.3d at 1379–80; *Nevro*, 955 F.3d at 42; *Barkan*, 2019 WL 497902, at *39–40.

G. “electro-optical sensor” (Claims 1, 4, 6–8, 11–13)

Dispute: Should the meaning of this claim term be clarified for the jury?

As with the “electro-optically sensing” terms for the ’431 Patent, GTP originally proposed this term for construction, suggesting there is a need to construe it. Although the patent does not explain what an “electro-optical” sensor is, Defendants’ proposal is consistent with how similar terms are defined by technical dictionaries and would clarify the meaning of this technical term for the benefit of the jury. *See* Ex. K at 349; Ex. L at 665–66.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was filed electronically in compliance with Local Rule CV-5 on September 2, 2021. As of this date, all counsel of record had consented to electronic service and are being served with a copy of this document through the Court's CM/ECF system under Local Rule CV-5(a)(3)(A).

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